### Task:

**Application field:** Building Materials  
**Material:** Calcium carbonate, amorphous and crystalline  
**Feed size:** 0-3 mm (after pre crushing in BB 51)  
**Feed quantity:** 200 g (per batch)  
**Material specification(s):** medium-hard  
**Customer requirement(s):** < 2 - 3 µm, no additional information  
**Subsequent analysis:** not defined

### Solution:

**Selected instrument(s):**  
BB 51 Laboratory Jaw Crusher  
PM 100 Planetary Ball Mill  
**Configuration(s):**  
Grinding jar 500 ml Zirconium YTZ  
20 grinding balls 20 mm Ø Zirconium YTZ  
**Parameter(s):**  
Revolution speed PM 100 = 350 rpm  
Gap size Jaw Crusher BB 51 = 1.5 mm  
**Time:** 20 min. (per batch)  
**Achieved result(s):**  
d50 = 1.34 µm (sample amorphous)  
d50 = 1.72 µm (sample crystalline)  
measured by Laser "HORIBA LA--300"  
**Remark(s):** The sample preparation was done acc. to the following work flow:  
1. Pre crushing of the total sample quantity in Jaw Crusher BB 51, jaws of zirconia.  
2. Sample dividing with PT 100  
3. Fine grinding of representative single samples in Planetary Ball Mill PM 100  
**Recommendation:** For fine grinding of medium hard minerals the Planetary Ball Mill PM 100 is suitable under the above mentioned conditions.